

## SOME CHANGES IN NOMENCLATURE. 1 \*

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A need has long been felt for a complete flora of the Cape Peninsula<sup>5</sup> an area which is probably better known than most others in South Africa. A few years ago preliminary work on such a flora was started by a number of local botanists, and it soon became evident that a very large amount of work would be necessary before a really sound flora could be produced. The existing descriptions of plants growing on the Cape Peninsula are often incomplete or wrong and it is the aim of the collaborators in this flora to examine each species in the living state and to amend the existing descriptions. In addition to this, problems of nomenclature confront the workers at every turn and frequently before these can be solved work has to be extended to embrace plants growing in other parts of South Africa. Clearing up one error has in many cases revealed others, so that in order to put one thing right it becomes necessary to embark on a number of different researches which might appear to have little connection. One of these chain problems is discussed here.

1. THE GENERA *POLYCARENA* AND *PHYLLOPODIUM*.

In October 1937, Captain T. M. Salter collected a plant which was identified as an unknown species of *Polycarena*. A short time later it was discovered that specimens of this plant were present in the local herbaria under the name *Selago cephalophora* Thunb. Many specimens quoted in the Flora Capensis under this name have a multi-ovulate ovary, and it at once became necessary to know if Thunberg's type also showed this feature. Professor Svedelius very kindly gave permission for Dr. H. Smith and Mr. C. G. Alm to dissect a flower from the type specimen. This proved to have a multi-ovulate ovary, thus confirming the suspicions raised by Captain Salter's plant. The discovery necessitated the transference of this plant to the tribe Manuleae of Scrophulariaceae. This, however, promptly raised a second problem for the calyx is slightly bilabiate and the plant therefore would seem to

\*The present paper is the first of a series of communications which will appear at irregular intervals.

fit into *Polycarena*. Previous experience with these members of Scrophulariaceae had made the writer aware that a similar type of calyx was characteristic of some well established species of *Phyllopodium*, and grounds for the separation of these two genera had to be considered before the transference of Thunberg's species could be effected.

Both *Polycarena* and *Phyllopodium* were established by Bentham in 1836. The basis of their separation is the calyx which in *Polycarena* is bilabiate and in *Phyllopodium* more or less regular. Hiern in the Flora Capensis introduces a further distinction in that while *Polycarena* is stated to have a two-chambered ovary, a one-chambered ovary is attributed to *Phyllopodium*. This supposed difference in the ovary has no existence in fact as in the very large number of flowers dissected by the writer no case of a one-chambered ovary has been observed. Consequently in separating these genera one has to fall back on Bentham's distinguishing character, the calyx.

While examining *Phyllopodium capitatum* Benth. the writer observed a somewhat bilabiate calyx and as this seemed inconsistent with its position in *Phyllopodium* a large number of flowers were examined. The calyx showed some variability with regard to the degree of separation of the lobes but there was a distinct bilabiate tendency in all. *Phyllopodium heterophyllum* Benth., a much more common plant, was then examined and it too was found to possess this type of calyx. All the species of these genera in the Bolus Herbarium were then studied with regard to the character of their calyx. The majority in *Phyllopodium* showed a slightly bilabiate calyx, very few being quite regular. *Polycarena* on the other hand, showed great variability in its calyx. Some species such as *P. capensis* Benth. are definitely bilabiate, while others such as *P. tenella* Hiern are no more bilabiate than the species of *Phyllopodium* previously discussed. It follows that a feature of this type cannot be used as sole basis for the separation of two genera. Many of the species lie just on the boundary line between the two genera as defined at present and the placing of a species in its proper genus is largely a matter of personal opinion. The writer therefore proposes to sink the genus *Phyllopodium* and retain *Polycarena*. The only amendment necessary in the description of *Polycarena* is in the calyx which should be described as being either regular or bilabiate.

The following list gives the species now being transferred to *Polycarena* :—

- Polycarena cuneifolia* (Benth.) nov. comb.
- \* *Polycarena Auzei* (Hiern) nov. comb.
- Polycarena bracteata* (Benth.) nov. comb.
- \* *Polycarena sordida* (Hiern) nov. comb.

- Polycarena diffusa* (Benth.) nov. comb.  
*Polycarena calva* (Hiern) nov. comb.  
*Polycarena multifolia* (Hiern) nov. comb.  
*Polycarena capitata* (Benth.) nov. comb.  
*Polycarena heterophylla* (Benth.) nov. comb.  
*Polycarena pumila* (Benth.) nov. comb.  
\* *Polycarena rupestris* (Hiern) nov. comb.  
\* *Polycarena minima* (Hiern) nov. comb.  
*Polycarena glutinosa* (Schlechter) nov. comb.  
*Polycarena Schlechteri* (Hiern) nov. comb.  
*Polycarena alpina* (N.E.Br.) nov. comb.  
\* *Polycarena Baurii* (Hiern) nov. comb.  
*Polycarena linearifolia* (Bolus) nov. comb.  
\* *Polycarena Rangei* (Engl.) nov. comb.  
*Polycarena cephalophora* (Thunb.) nov. comb.

Wherever possible the type specimen or a specimen quoted in the Flora Capensis has been studied. The exceptions are those marked \*. Of these no reliable specimens are available for examination and their transference is therefore made with less certainty than in the other cases. The degree of uncertainty is due to the fact that of the species which have been examined two are incorrectly placed in *Phyllopodium*, and the possibility of some of the others being in the wrong genus must be borne in mind. The two which are not being transferred to *Polycarena* are discussed below.

The first of these is *Phyllopodium Rudolphi* Hiern, a plant of which, bearing Schlechter's number 10205, is in the Bolus Herbarium. This on examination proved to have a two-chambered ovary with a single pendulous ovule in each chamber and consequently belongs to the Selaginaceae. In this plant the bract is adnate to the calyx, the calyx is almost regular and deeply five-lobed, and there are four fertile stamens. As the genera are defined at present it fits into none given in the Flora Capensis, neither does it agree with *Cromidon* or *Globulariopsis*, two genera described by Compton. This family is in need of careful revision and the writer is not disposed to create yet another genus for this unconformable species. For the present it is probably best regarded as an aberrant species of *Selago*, a genus from which it differs only in its adnate bract, a character which is of doubtful generic importance. Schlechter 10205 therefore becomes *Selago Rudolphi* (Hiern) nov. comb.

The second species is *Phyllopodium Krebsianum* Benth. This species is entirely different from all the others which have been examined. The soft herbaceous texture of plants belonging to *Polycarena* in the wide sense is very characteristic, and dried specimens when placed in boiling

water become soft and offer considerable difficulties in dissection. *Phyllopodium Krebsianum* on the other hand has a firm texture when alive and on boiling becomes almost leathery. The writer has collected it on the Boschberg at Somerset East and the impression made by the living plant with its wide-tubed and showy corolla, is certainly not that of a *Polycarena*. For these reasons this plant is not placed under *Polycarena* and the problem of its generic position remains to be solved. *Sutera* as defined in the Flora Capensis might be extended to include it (the adnate bract is not a character of *Sutera*) or it might be preferable to place it in a separate genus. At present the position of this species must remain doubtful.

## 2. THE IDENTITY OF *Heisteria mitior* BERG.

In the course of an investigation into the identity of the plant named by Linnaeus *Polygala stipulacea* several references were found stating that this plant was the same thing as *Heisteria mitior* Berg. The specific name *mitior* antedates the Linnaean name *stipulacea* and it therefore became necessary to know what plant Bergius called *Heisteria mitior*. Unfortunately there is some doubt as to the plant to which Linnaeus gave the name *Polygala stipulacea*, and therefore two distinct plants which had claims to be regarded as the Linnaean plant were sent to Stockholm for comparison with Bergius' type of *Heisteria mitior*. Professor R. E. Fries kindly made the comparison and reported that neither species agreed with the plant in the Bergius collection. In order to try and clear matters up Professor Fries sent to the writer a small fragment of the type specimen and fortunately this was easily identified as the plant at present known as *Muraltia mixta* DC. This species has a characteristic calyx which marks it off from all other species with the exception of *Muraltia alopecuroides* DC. The writer then sent Professor Fries a representative specimen of *Muraltia mixta* DC which was stated to agree perfectly with the type specimen of *Heisteria mitior*. Change of name is therefore necessary and *Muraltia mixta* (L.f.) DC becomes *Muraltia mitior* (Berg) nov. comb.

## 3. A CORRECTION AND SOME NOTES ON CERTAIN SPECIES OF ELYTROPAPPUS.

A few years ago the writer published some new combinations in *Elytropappus* (Trans. Roy. Soc. S.Af. XXIII. 93. 1935). Recently it was discovered that two of these combinations, *E. hispidus* and *E. scaber*, had been made by Druce (Rep. Bot. Exch. Cl. Br. Is. 1916. 621. 1917). Druce therefore is the correct authority for *Elytropappus hispidus*. The case of *Elytropappus scabrus* Druce, however, is not a straight-

forward one. In the paper by the writer quoted above and in a subsequent revision of the genus (Journ. S.Af. Bot. I. 89. 1935) it was demonstrated that the name *Stoebe scabra* L.f. applies to three of four specimens of *Elytropappus* named by de Candolle *E. glandulosus* Less. var. *microphyllus*. These therefore become *E. scaber*. The fourth specimen of this variety is the genuine *E. glandulosus* Less. which therefore retains the name. In addition to the two species just mentioned two others were included in the Flora Capensis to which Druce refers, under *E. glandulosus* Less.; viz. *E. gnaphaloides* (L.) Levyns and *E. longifolius* (DC) Levyns. It is therefore clear that *Elytropappus glandulosus* Less. as understood in the Flora Capensis is a mixture of four species, and the specific name *scaber* which Druce applies to this heterogeneous collection, only applies to one of them.